

negative correlation between the Self-Awareness levels and total score of the perceived stress levels after the intervention indicates the potential stress-protective effects of this EI subdomain ($\rho = -0.439$, $p < 0.05$).

Conclusion: Our results suggest that even short-term mindfulness interventions may positively impact some EI competencies, particularly the Emotional Self-Control subdomain. They also indicate that the intervention may increase emotional self-awareness' protective effects against perceived stress. Implementing mindfulness-based interventions should be considered throughout the continuum of pharmacists' professional development, particularly in pharmaceutical care. Additional research with longer-term interventions is needed to confirm our findings.

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Strengthening continuity of health care: Requesting medication updates from community pharmacy to primary care physicians. A case report.

Ana Isabel Sanchez Molina^{1,*}, Daniel Dominguez Tristancho², Lola Bureo Nogales², Paulina Dominguez Hurtado², Teresa Lorido Corrales³

¹ Community Pharmacist; ² Physician in Primary Care; ³ Nurse in Primary Care

* Corresponding author:

E-mail address: anasanchezmolina1978@gmail.com (A.I. Sanchez Molina).

Electronic prescribing enables prescribers to remotely submit prescriptions to community pharmacies. It has been promoted as a solution to improve patient safety and the quality and continuum of healthcare. Requesting the update of a given e-prescription, formalize the process by which a GP authorizes its renewal. This process ensures that the treatment is available for dispensing for a maximum of 12 months. Although e-prescription activation request from community pharmacies reduces the need for ongoing prescription renewals, the time that a GP allocates to associated administrative tasks may vary depending on the healthcare system, the IT systems, and the administrative load at the health centre. Previous research indicate that GPs spend a significant amount of time on administrative tasks, including medication management on patients' health records.

Objective: To evaluate the update request of e-prescriptions from a community pharmacy.

Method: This case report adopted a quasi-experimental design and was conducted over six-months (February–August 2024) in a community pharmacy and a health centre in Badajoz, Spain. The study sample consisted of 550 patients attending the same community pharmacist, GP, and nurse. The community pharmacy carried out a two-level intervention, involving patient and physician interactions. The pharmacist-patient interaction was conducted during the dispensing process whenever it was identified that they required a medication, but an e-prescription was not available. In this scenario, the pharmacist offered the patient assistance in updating their e-prescription by contacting the GP directly. The pharmacist-GP interaction involved a pharmacist-initiated communication to request the update of the patient's e-prescription.

The agreed communication channel between the community pharmacist and the GP was text messaging.

Results: The community pharmacy conducted 931 interventions. The GP made 1,324 prescription modifications for patients, of which: 1,135 (85,72 %) were prescription updates for prescription renewals for patients with chronic diseases, 92 (6,95 %) to initiate new prescriptions, 58 (4,38 %) updates of prescription dates, 25 (1,89%) changes in the medicine dose or dosing regimen, and 14 (1,05 %) modifications in the quantity or administration form. Interventions were accepted by both patients and the GP and resolved in 100% of cases.

Conclusions: This study demonstrates that requesting e-prescription updates and modifications from the community pharmacy to the GP is an efficient process when a rapid and an effective communication channel is used. This collaboration with GPs benefits the patient by facilitating access to needed medications without extra administration processes.

Key words: physician, primary care, pharmacist, e-prescriptions, community pharmacy.

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Patterns of Use and User Attitudes Toward Herbal-based Food Supplements and OTC Medicines in Bulgaria

Alexander Mitev^{1,*}, Evelina Gavazova^{2,**}, Katerina Slavcheva², Radiana Staynova², Daniela Kafalova², Nelina Neycheva²

¹ Faculty of Pharmacy, Medical University of Plovdiv; ² Department of Organisation and Economics of Pharmacy, Faculty of Pharmacy, Medical University of Plovdiv, Bulgaria

* Corresponding author:

** Corresponding author

E-mail addresses: mitev7@outlook.com (A. Mitev), gavazova.evelina@gmail.com (E. Gavazova).

Background: The rising use of food supplements and over-the-counter (OTC) medicines containing herbal substances has sparked ongoing discussions about their safety, effectiveness, and potential interactions with conventional medications. Despite their widespread popularity, there is limited data on consumer awareness and behaviors regarding these products, especially in terms of their risks and benefits.

Aim: This study sought to examine the prevalence, usage patterns, and motivations for using food supplements and OTC medicines with herbal ingredients in Bulgaria. It also aimed to assess the level of consumer knowledge regarding the safety, efficacy, and potential interactions of these products with other medications.

Methods: An electronic survey was administered between May and September 2024, collecting responses from 1,055 Bulgarian adults. The survey explored participants' usage habits, preferred herbal ingredients, perceived benefits, and their awareness of associated risks. Data on spending habits, sources of purchase, and healthcare consultations were also gathered.

Findings: A significant 76% of respondents reported using herbal-based food supplements or OTC medicines, with 30% citing the natural origin and perceived safety of these products as their primary motivation. Over half of the users indicated that they use supplements to manage acute health issues, while many with chronic conditions integrated these products into their therapeutic routines. Notably, 24% of respondents admitted to substituting prescribed medications with herbal supplements. Spending on these products was primarily in the range of 100 to 200 euros annually. Interestingly, 58% of users consulted healthcare professionals, such as physicians or pharmacists, prior to purchasing supplements, and the majority preferred to buy them from pharmacies.

Conclusion: The findings highlight the widespread use of herbal-based products and the need for greater consumer education on their safety, efficacy, and potential interactions with prescribed medications. Healthcare providers and public health initiatives must enhance efforts to inform consumers about the appropriate use of these products to ensure both their benefits and safety. Future research should focus on the long-term effects of herbal supplements, their interactions with prescription drugs, and the role of regulatory measures in ensuring the safety and efficacy of these products.

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Keywords: food supplements, OTC medicines, herbal products, consumer behavior, safety, efficacy, drug interactions, Bulgaria

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Balancing Efficiency and Accuracy in Medication Review Type 3 Quality Assessment: A Novel Approach

Eline Tobback^{1,*}, Maja Brumer¹, Anneleen Robberechts^{1,2}, Guido De Meyer^{1,3}, Hans De Loof^{1,3}

¹ Laboratory of Physiopharmacology, University of Antwerp, Antwerp, Belgium;

² Meduplace, Royal Pharmacists Association of Antwerp (KAVA), Antwerp, Belgium; ³ Infla-Med Research Center of Excellence, University of Antwerp, Antwerp, Belgium

* Corresponding author:

E-mail address: eline.tobback@uantwerpen.be (E. Tobback).

Background: Medication review type 3 (MR3) is an advanced, comprehensive and collaborative re-view process engaging the pharmacist, the patient and the general practitioner, designed to optimize treatment, reduce medication errors, minimize waste and improve adherence. Quality assurance is essential for the successful implementation and continuous improvement of MR services. To ensure quality of MR3, the BRussels ANTwerp Medication Review Quality score (BRANT-MERQS) was developed, incorporating 45 general and 4 project-specific criteria. However, a streamlined version is needed to enable more efficient, yet reliable, quality assessments.

Purpose: The objective of this study was to create and test a more efficient scoring system to evaluate the quality of MR3.

Methods: Given the likelihood of the interdependence of the quality of MR3 components, a hypothesis was formatted that a random subset of BRANT-MERQS quality criteria could efficiently assess MR3 quality. Therefore, based on prior research, the criteria were randomized into a weighted list, to represent the relative importance of the criteria. A truncation value was required to ensure subsample scores aligned with the full sample assessments, generating overall representative quality scores.

Findings: Testing the sampling algorithm on the two different datasets of the BRANT-MERQS study revealed that using one-third of the criteria provided a reliable subsample, yielding consistent quality scores with minimal standard deviation. Biased sampling demonstrated advantages over an unbiased approach.

Conclusion: By using a biased random selection of BRANT-MERQS criteria, comprising one-third of the total number of criteria, the quality of medication reviews can be assessed significantly more efficiently while maintaining nearly the same accuracy.

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Mama Friendly community pharmacies in Serbia –improving medication safety during breastfeeding

Milena Kovačević^{1,*}, Ljiljana Stanković², Aleksandra Catić Đorđević³, Branko Petrović², Jasna Anđelković⁴, Jelena Milošević⁵, Marina Nedeljković⁶, Sandra Vezmar Kovačević¹, Branislava Miljković¹

¹ University of Belgrade-Faculty of Pharmacy, Department of Pharmacokinetics and Clinical Pharmacy, Belgrade, Serbia; ² Gynecology and Obstetrics Clinic “Narodni Front”, Belgrade, Serbia; ³ University of Niš, Faculty of Medicine –Pharmacy department, Niš, Serbia; ⁴ Pharmacy Kragujevac, Kragujevac, Serbia; ⁵ Pharmacy Dr Max, Belgrade, Serbia; ⁶ Pharmacy BENU, Belgrade, Serbia

* Corresponding author:

E-mail address: milena.kovacevic@pharmacy.bg.ac.rs (M. Kovačević).

Background: Although breastfeeding provides numerous health benefits for both babies and mothers, there are many barriers which interfere with achieving the WHO-recommended rate of exclusive breastfeeding to 50%. Serbia reports only 20% rates of exclusive breastfeeding in infants under 6 months.

Purpose: To support breastfeeding, National guidelines for medication use during breastfeeding were published in 2021, which was followed by its promotion and implementation among both pharmacists and breastfeeding mothers through Mama Friendly Project in 2022.

Method/study design: Community pharmacists received one-day comprehensive training on the safe use of medications in breastfeeding and subsequently provided pharmaceutical care services. Pharmaceutical care encompassed tailored interventions, such as counseling on medication administration concerning breast-feeding time, recommendation of a safer alternative medication, mothers' referral to a doctor, infant monitoring, and follow-up. E-lactancia was used to assess medication risk/compatibility with breast-feeding. Data were analyzed using SPSS software (ver 28).

Findings: A total of 724 breastfeeding mothers received pharmaceutical care interventions during 7 months. The average mothers' age was 31.2 ± 4.9 years, and infants' age 6.7 ± 1.4 months. More than half of mothers were primiparous (57.2%). At baseline, 57.3% of mothers reported concerns about continuing to breastfeed their babies because of the therapy they were using. Almost half of the mothers (46.5%) reported avoiding taking the prescribed medication(s) for their health problem due to fear for babies' safety. When asked about the physicians' instructions regarding medication use/breastfeeding, the majority reported no given advice (51.7%), to continue breastfeeding 41.7% and to cease breastfeeding 4.1%. After the pharmacists' intervention, the proportion of high-risk

(unsafe) medications decreased from 1.8% to 0.6%, and low-risk (fairly safe) medications from 19.5% to 18.2%. The risk class of dispensed medications significantly decreased during the study ($p=0.015$). Follow-up was performed face-to-face in 50.6% and via phone in 25.7% of cases. Pharmacists' interventions and ad-vice were accepted by 80% of mothers and rejected by 0.9% (unknown 14%). Recommendations for infant monitoring were given to 46.2% of mothers, while an effect was seen in 3.5% of babies (diarrhoea, rash, irritability, constipation, dark stools, oral candidiasis, sleepiness or vomiting).

Conclusion: Mama Friendly Project revealed high health and information needs in breastfeeding mothers, regarding medication use. Community pharmacists proved their significant role in improving the safe use of medications during breastfeeding, increasing the adherence level and breastfeeding continuation, which enables achieving desired health outcomes for both mothers and babies.

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Evaluating the Implementation of a Digital Health Intervention in Underserved Rural Areas of Portugal: the MobiMad@PT project

Joao Gregório^{1,*}, Anne-Gerd Granås², António Teixeira Rodrigues³, Ligia Reis¹, Melanie Maia⁴, Paulo Moreira⁵

¹ CBIOS - Universidade Lusófona's Research Center for Biosciences & Health Technologies; ² University of Oslo; ³ Centre for Health Evaluation & Research, National association of Pharmacies (CEFAR, ANF), Lisboa, Portugal; ⁴ CHRC, NOVA NMS, Universidade NOVA de Lisboa; ⁵ Sports, Health and Human Development Research Center, Universidade Trás-os-Montes e Alto-Douro

* Corresponding author:

E-mail address: joao.gregorio@ulusofona.pt (J. Gregório).

Background: Medication non-adherence poses significant challenges to managing chronic conditions, particularly cardiovascular diseases, which remain the leading cause of morbidity and mortality globally. Health-care access barriers and geographical isolation further exacerbate this issue. Digital health interventions, including automated dose dispensing systems like Mobili®, present innovative solutions to address adherence challenges, improve health outcomes, and enhance healthcare sustainability in underserved populations.

Purpose: This project aims to study the implementation of Mobili®, a portable automated dose dispensing system developed by Medthings (a Norwegian start-up), as part of a broader digital health intervention tailored to underserved populations in Portugal. It seeks to evaluate how this intervention can be effectively integrated into primary care systems to improve medication adherence and address healthcare disparities among underserved populations.

Method/Study Design: The project employs an implementation science framework with structured work packages (WPs) that encompass:

1. Tailoring Mobili® to the specific needs of underserved populations of Portugal through stakeholder engagement and usability testing.
2. Assessing the rollout of Mobili® using both qualitative and quantitative methods, including patient engagement, adherence rates, and healthcare provider feedback. A Parallel-group, Staggered enrollment, Randomized Controlled Trial (RCT), with 1:1 allocation ratio will assess the effectiveness of the device among patients with cardiovascular diseases. Participants will be recruited from community pharmacies, targeting non-institutionalized adults aged 18 years or older requiring only regular oral medication that can be dispensed in the eDose. The eDose preparation will follow the guidelines of the Portuguese Pharmaceutical Society for the Dose Administration Aid (DAA) Service. The control group will use the current DAA system available in the pharmacy.
3. Using the Consolidated Framework for Implementation Research 2.0 (CFIR) to explore key factors influencing the success of the intervention, such as context, adaptability, and stakeholder involvement.
4. Sharing evidence-based findings with policymakers, healthcare providers, and other stakeholders to inform broader adoption and scalability.

Findings: Although findings are not yet available, the project will deliver critical insights into the practicalities and effectiveness of implementing digital health interventions in underserved contexts. It will explore patient adherence patterns, user experiences, and the intervention's integration into existing healthcare systems.

Conclusion: This project's findings will contribute to better understand the impact of digital health interventions on medication adherence, and will be valuable to researchers in medication adherence and implementation science.